CLAIMS

1. An apparatus for dry physical separation of particulate material, the apparatus comprising:

an inclined separating surface having upper and lower edges,

oscillation means for inducing non-linear oscillatory motion of the separating surface, and

introduction means for introducing the particulate material onto the separating surface between the upper and lower edges.

2. An apparatus as claimed in claim 1 wherein the non-linear oscillatory motion is an elliptical or eccentric motion.

3. An apparatus as claimed in claim 1 or claim 2 wherein the oscillation means comprises a variable speed motor driving an out of balance flywheel.

4. An apparatus as claimed in claim 1 or claim 2 wherein the oscillation means comprises means for imparting a plurality of non-parallel linear motions.

5. An apparatus as claimed in claim 3 or claim 4 wherein the oscillation means further comprises means for imparting a linear motion at an angle to the axis of the non-linear oscillatory motion.

6. An apparatus as claimed in any one of the preceding claims wherein the separating surface is mounted on a base which is mounted on or supported by springs.

7. An apparatus as claimed in claim 6 wherein the separating surface is arranged for limited movement relative to the base.

8. An apparatus as claimed in any one of the preceding claims wherein one or more of the frequency of the non-linear oscillatory motion, the amplitude of the non-linear oscillatory motion and the angle of inclination of the separating surface are variable.

9. An apparatus as claimed in any one of the preceding claims wherein the separating surface is inclined at an angle of 1-20°.

10. An apparatus as claimed in claim 9 wherein the separating surface is inclined at an angle of 10-15°.

11. An apparatus as claimed in any one of the preceding claims wherein the apparatus has a plurality of separating surfaces arranged for use in series.

12. A method for dry physical separation of particulate material, the method comprising the steps of:

inducing non-linear oscillatory motion of an inclined separating surface having upper and lower edges, and

introducing the particulate material onto the separating surface between the upper and lower edges

whereby a first portion of the particulate material moves upwardly towards the upper edge and a second portion of the particulate material moves downwardly towards the lower edge.